AMENDMENTS TO THE CLAIMS

1. (Currently amended) A heating unit for use in a continuous casting installation, said heating unit ~~including~~ comprising a heating chamber for liquid metal having an inlet and an outlet, the heating chamber being constructed and arranged for a continuous flow of liquid metal through the chamber from the inlet to the outlet, and at least one thermostatically controllable electrical resistance heating element mounted within the heating chamber below the level of the outlet, said heating element being constructed and arranged to heat liquid metal flowing through the chamber to a predetermined liquid metal temperature.

2. (Currently amended) ~~A~~ The heating unit according to claim 1, wherein each said electrical resistance heating element is enclosed within a protective element made of a refractory material.

3. (Currently amended) ~~A~~ The heating unit according to claim 2, wherein the protective element ~~includes~~ comprises a sealed protective sleeve.

4. (Currently amended) ~~A~~ The heating unit according to ~~any one of the preceding claims~~claim 1, wherein the heating chamber is elongate, and the inlet and the outlet are located towards opposite ends thereof.

5. (Currently amended) ~~A~~ The heating unit according to claim 4, wherein said at least one heating element is elongate and is mounted lengthways within the heating chamber.

6. (Currently amended) ~~A~~ The heating unit according to ~~any one of the preceding claims~~claim 1, ~~including~~ further comprising at least one temperature sensor.

7. (Currently amended) ~~A~~ The heating unit according to claim 6, wherein ~~a~~ the temperature sensor is arranged to sense the temperature of liquid metal adjacent the outlet.

8. (Currently amended) ~~A~~ The heating unit according to ~~any one of the preceding claims~~claim 1, wherein the heating chamber has a refractory liner.

9. (Currently amended) ~~A~~ The heating unit according to ~~any one of the preceding claims~~claim 1, ~~including~~ further comprising a lid for the heating chamber.

10. (Currently amended) ~~A~~ The heating unit according to ~~any one of the preceding claims~~claim 1, ~~including~~ further comprising a drain outlet for the heating chamber.

11. (Currently amended) ~~A~~ The heating unit according to ~~any one of the preceding claims~~claim 1, ~~including~~ further comprising a filter chamber.

12. (Currently amended) ~~A~~ The heating unit according to claim 11, ~~including~~ further comprising a transfer conduit connecting the filter chamber and the heating chamber.

13. (Currently amended) ~~A~~ The heating unit according to claim 11 ~~or claim 12~~, wherein the filter chamber is located upstream of the heating chamber.

14. (Currently amended) ~~A~~ The heating unit according to ~~any one of claims 11 to 13~~claim 11, ~~including~~ further comprising a ceramic foam filter mounted in the filter chamber.

15. (Currently amended) ~~A~~ The heating unit according to ~~any one of claims 11 to 14~~claim 11, ~~including~~ further comprising a lid for the filter chamber.

16. (Currently amended) ~~A~~ The heating unit according to ~~any one of claims 11 to 15~~claim 11, ~~including~~ further comprising a drain outlet for the filter chamber.

17. (Currently amended) A casting installation for use in a continuous casting process, the installation ~~including~~ comprising a furnace for heating metal to a first liquid metal temperature, a casting machine ~~including~~ comprising a pair of casting rollers and a nozzle arranged to deliver liquid metal into a nip between the casting rollers, such that the metal solidifies as it passes through the nip, a feed line for supplying liquid metal from the furnace to the casting machine, and a heating unit located in the feed line between the furnace and the casting machine, said heating unit being thermostatically controlled and arranged to heat the liquid metal to a second liquid metal temperature; ~~characterised in that~~wherein the heating unit ~~includes~~ comprises a heating chamber for liquid metal having an inlet and an outlet, the heating chamber being constructed and arranged for a continuous flow of liquid metal through the chamber from the inlet to the outlet, and at least one thermostatically controllable electrical resistance heating element mounted within the heating chamber below the level of the outlet.

18. (Currently amended) ~~A~~ The casting installation according to claim 17, ~~including~~ further comprising a degassing unit.

19. ~~A~~ The casting installation according to claim 18, wherein the heating unit is downstream of the degassing unit.

20. (Currently amended) ~~A~~ The casting installation according to ~~any one of claims 17 to 19~~claim 17, ~~including~~ further comprising a filter unit.

21. (Currently amended) ~~A~~ The casting installation according to claim 20, wherein the heating unit is downstream of the filter unit.

22. (Currently amended) ~~A~~ The casting installation according to ~~any one of claims 17 to 21~~claim 17, wherein the casting machine ~~includes~~ further comprises a headbox and the heating unit is upstream of the headbox.

23. (Currently amended) ~~A~~ The casting installation according to ~~any one of claims 17 to 22~~claim 17, ~~including~~ further comprising a thermostatic control device for controlling the heating unit.

24. (Currently amended) ~~A~~ The casting installation according to ~~any one of claims 17 to 23~~claim 17, wherein the heating unit is constructed and arranged to heat liquid metal flowing through the chamber to a predetermined liquid metal temperature~~is as defined by any one of claims 1 to 16~~.

25. (Currently amended) A continuous casting process, the process ~~including~~ comprising the steps of :

heating a metal in a furnace to a first liquid metal temperature,

supplying the liquid metal through a feed line from the furnace to a casting machine that ~~includes~~ comprises a nozzle and a pair of casting rollers, and

delivering the liquid metal through the nozzle into a nip between the casting rollers so that the metal solidifies as it passes through the nip; ~~characterised in that~~wherein the liquid metal is heated to a second liquid metal temperature in a thermostatically controlled heating unit located in the feed line between the furnace and

the casting machine; said heating unit ~~including~~ comprising a heating chamber for liquid metal having an inlet and an outlet, the heating chamber being constructed and arranged for a continuous flow of liquid metal through the chamber from the inlet to the outlet, and at least one thermostatically controllable electrical resistance heating element mounted within the heating chamber below the level of the outlet.

26. (Currently amended) ~~A~~ The process according to claim 25, ~~including~~ further comprising the step of degassing the liquid metal.

27. (Currently amended) ~~A~~ The process according to claim 26, wherein the liquid metal is heated to the second liquid metal temperature after the degassing step.

28. (Currently amended) ~~A~~ The process according to ~~any one of claims 25 to 27~~claim 25, ~~including~~ further comprising the step of filtering the liquid metal.

29. (Currently amended) ~~A~~ The process according to claim 28, wherein the liquid metal is heated to the second liquid metal temperature after the filtering step.

30. (Currently amended) ~~A~~ The process according to ~~any one of claims 25 to 29~~claim 25, in which the second liquid metal temperature lies in the range 600-800°C~~, preferably 650-750°C, more preferably 680-720°C~~.

31. (Currently amended) ~~A~~ The process according to ~~any one of claims 25 to 30~~claim 25, in which the liquid metal is heated in the heating unit to produce a temperature rise in the range 0-50°C~~, preferably 0-20°C, more preferably 0-10°C~~.

32. (Currently amended) ~~A~~ The process according to ~~any one of claims 25 to 31~~claim 25, ~~including~~ further comprising the step of sensing the temperature of the liquid metal and controlling the heating unit according to the sensed temperature.

33. (Currently amended) ~~A~~ The process according to claim 32, in which the temperature of the liquid metal is sensed at ~~an~~ the outlet of the heating unit.

34. (Currently amended) ~~A~~ The process according to claim 32~~ or claim 33~~, in which the temperature of the liquid metal is sensed at ~~an~~ the inlet of the heating unit.

35. (Currently amended) ~~A~~ The process according to ~~any one of claims 25 to 34~~claim 25, wherein liquid metal is retained in the heating unit at the end of a casting run, and the retained metal is maintained in a liquid state by heating the metal in the heating unit.

36. (Currently amended) ~~A~~ The process according to claim 35, wherein the depth of the retained metal is sufficient to cover the at least one heating element.